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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,834	01/10/2002	Charles Bailey Neal	RCA 89633	2357

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Joseph S Tripoli
Thomson Multimedia Licensing Inc
PO Box 5312
Princeton, NJ 08543-5312

EXAMINER	
TRAN, TRANG U	

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/030,834	NEAL, CHARLES BAILEY	
	Examiner	Art Unit	
	Trang U. Tran	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/10/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

Arrangement of the Specification

1. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.
(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of

the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

(e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract

and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property

Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(k) Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han (US Patent No. 6,421,094 B1) in view of Fujimoto (US Patent No. 5,912,710).

In considering claim 1, Han discloses all the claimed subject matter, note 1) the claimed a video signal processing apparatus (Figs. 1 and 2), comprising: a first video signal source for providing a first video signal having a first color format is met by the NTSC or VGA video data which have the format information on each respective video data and various control signals (Figs. 1-2, col. 2, line 11-43 and col. 3, lines 47-63), 2) the claimed a second video signal source for providing a second video signal having a second color format is met by the DTV video data which has different color formats (Figs. 1-2, col. 2, lines 11-43 and col. 3, lines 37-47), 3) the claimed means for generating an On Screen Display (OSD) signal formatted in accordance with the first or second color format is met

by the OSD processor 14 which further includes a data converter 252 which receives and converts the OSD data output from the memory interfacer 13 into a uniform format and outputs a control signal to output the data in the selected OSD receiver (Figs. 1 and 3, col. 3, line 5 to col. 4, line 55), 4) the claimed a plurality of color conversion matrices for converting the color information in the color palette to provide the OSD signal, which is formatted in accordance with a selected one of the first or second color format, in response to the selection of the first or second video signal source is met by the data converter 151 which converts the read OSD data having a YCbCr color format of 4:4:4, 4:2:2, or 4:2:0 into one uniform YCbCr color format of 4:4:4 and outputs the converted data to the MUX 153 (Figs. 1-3, col. 3, line 5 to col. 4, line 55), and 5) the claimed means operatively coupled to the OSD generating means and the first and second video signal sources, for combining the OSD signal generated by the OSD generating means with the selected one of the first or second video signals is met by the multiplexer (MUX) 153 which receives the converted OSD data from the data converter 151 and the converted DTV or NTSC/VGA data from the format converter 14 according to the control signal from the data converter 151 (Figs. 1-3, col. 3, line 5 to col. 4, line 55).

However, Han explicitly does not disclose the claimed a color palette that includes color information formatted in accordance with a predetermined color format.

Fujimoto teaches that the RGB color palette circuit 104a converts the pixel data to RGB color data, for example, when one pixel of the graphics data is

comprised of an index color mode having eight bits/pixel, the index color data are converted to a color data of twenty-four bits for the respective colors of R (red), G (green) and B (blue) (Fig. 1, col. 7, lines 1-23).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the RGB color palette as taught by Fujimoto into Han' s system in order to optimize the hardware for an OSD data processing in converting data of various color formats and OSD formats into a uniform format.

In considering claim 2, the claimed wherein the color palette comprises color information formatted in the RGB format is met by the RGB color palette circuit 104a converts the pixel data to RGB color data (Fig. 1, col. 7, lines 1-23 of Fujimoto).

In considering claim 4, the claimed wherein the first video signal is an analog television signal is met by the NTSC or VGA video data which have the format information on each respective video data and various control signals (Figs. 1-2, col. 2, line 11-43 and col. 3, lines 47-63).

In considering claim 5, the claimed wherein the second video signal is a digital television signal is met by the DTV video data which has different color formats (Figs. 1-2, col. 2, lines 11-43 and col. 3, lines 37-47).

In considering claim 6, Han discloses all the claimed subject matter, note 1) the claimed a method of producing graphics having a color format that matches the color format of a received signal, the method comprising the steps of: selecting a video signal source from a plurality of video signal sources, the

signal source providing video signals formatted in accordance with a first color signal format is met by the data receiver 11 which receives and outputs a DTV video data, an NTSC or VGA video data, an OSD data and the memory interfacer 13 which selects the video data output from the data receiver and managing the writing/reading of the selected data on/from the memory 12 (Fig. 2, col. 2, line 38 to col. 3, line 10), 2) the claimed providing a plurality of color conversion matrices, wherein each color conversion matrix is adapted to convert the color information in the color palette to provide a graphics signal that is formatted in accordance with a particular color format is met by the data converter 151 which converts the read OSD data having a YCbCr color format of 4:4:4, 4:2:2, or 4:2:0 into one uniform YCbCr color format of 4:4:4 and outputs the converted data to the MUX 153 (Figs. 1-3, col. 3, line 5 to col. 4, line 55), 3) the claimed selecting a desired one of the plurality of color conversion matrices that corresponds to the selected video signal source and generating a graphics signal formatted in accordance with the first color signal format is met by the host interfacer 112 which receives the DTV video format information from the frame controller 11, the NTSC and VGA mode signal and the host interface signal, and outputting an OSD data, display format information, input format information, and various control signals to select the desired one of the plurality of color conversion matrices (Fig. 2, col. 2, line 63 to col. 4, line 55), 4) the claimed combining the graphics signal with the received signal is met by the multiplexer (MUX) 153 which receives the converted OSD data from the data converter 151 and the converted DTV or NTSC/VGA data from the format converter 14

according to the control signal from the data converter 151 (Figs. 1-3, col. 3, line 5 to col. 4, line 55), and 5) the claimed processing the combined signal to generate an output signal is met by the color space converter 16, a Look Up Table (LUT) 17 further processing the OSD overlaid video data and displays on the monitor (Figs. 1-2, col. 4, line 56 to col. 5, line 23).

However, Han explicitly does not disclose the claimed providing a color palette that includes color information formatted in accordance with a predetermined color format.

Fujimoto teaches that the RGB color palette circuit 104a converts the pixel data to RGB color data, for example, when one pixel of the graphics data is comprised of an index color mode having eight bits/pixel, the index color data are converted to a color data of twenty-four bits for the respective colors of R (red), G (green) and B (blue) (Fig. 1, col. 7, lines 1-23).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the RGB color palette as taught by Fujimoto into Han' s system in order to optimize the hardware for an OSD data processing in converting data of various color formats and OSD formats into a uniform format.

In considering claim 7, the claimed wherein the color palette comprises color information formatted in the RGB format is met by the RGB color palette circuit 104a converts the pixel data to RGB color data (Fig. 1, col. 7, lines 1-23 of Fujimoto).

In considering claim 8, the claimed wherein the color conversion matrices convert the color information in the color palette into one of a Y, PR, PB formatted signal and Y, PI, PQ formatted signal is met by the color space converter 104b which converts the RGB color data from the color palette circuit 104a to YCrCb television standard (Fig. 1, col. 7, lines 1-23 of Fujimoto).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Han (US Patent No. 6,421,094 B1) in view of Fujimoto (US Patent No. 5,912,710), as applied to claim 1 above, and further in view of Susumu Imai (JP 403268594 A (see abstract)).

In considering claim 3, the claimed wherein the plurality of conversion matrices includes a conversion matrix for converting the color information in the color palette into Y, PR, PB format is met by the color space converter 104b which converts the RGB color data from the color palette circuit 104a to YCrCb television standard (Fig. 1, col. 7, lines 1-23 of Fujimoto).

However, the combination of Han and Fujimoto explicitly do not disclose the claimed a conversion matrix for converting the color information in the color palette into Y, PI, PQ format.

Susumu Imai teaches that in an picture recoding system, an RGB-YIQ conversion part 2 executes the matrix conversion of a digital signal consisting of R, G and B components into a brightness component Y and color difference components I, Q and sends the converted components Y, I, Q to a digital recording part 5 (see abstract).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the RGB-YIQ matrix conversion as taught by Susumu Imai into the combination of Han and Fujimoto's system in order to attain partial emphasis corresponding to human visual sense without damaging a gradation change by converting digital picture into a brightness component and color difference components (see abstract of Susumu).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Horton (US Patent No. 5,969,770) discloses animated "on-screen" display provisions for an MPEG video signal processing system.

Gove et al. (US Patent No. 5,990,982) disclose DMD-based projector for institutional use.

Hrusecky et al. (US Patent No. 6,542,162 B1) disclose color mapped and direct color OSD region processor with support for 4:2:2 profile decode function.

Herrera (US Patent No. 6,208,350 B1) discloses methods and apparatus for processing DVD video.

Mendenhall et al. (US Patent No. 6,570,626 B1) disclose on-screen display format reduces memory bandwidth for on-screen display systems.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (703) 305-0090. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRANG TRAN
PATENT EXAMINER

TT
August 4, 2004